KANSAS MEDICAL JOURNAL.

VOL. IX. TOPEKA, KANSAS, SATURDAY, AUGUST 28, 1897. No. 35.

ORIGINAL ARTICLES.

Seborrhoic Epithelioma.

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Professor of Skin and Venereal Diseases, Kansas Medical College.

Read at the Thirty-first Annual meeting of the Kansas Medical Society, Topeka, May 12-14, 1897.

Seborrhoic epithelioma is a rare affection, but probably is of more frequent occurrence than is supposed. Within the last three or four years quite a number of cases have come under my observation in which there was not much doubt as to the character of the disease, from the history furnished by the patients of a long standing eczema of the face or other portions of the body.

Seborrhoic epithelioma is not a true seborrhea, but it has something in common with seborrhea and eczema, and yet the germ which produces the epitheliomatous variety of the affection may be independent of seborrhea or eczema. Brocq describes a seborrhea which is composed of epithelial cells and fat cells which he says may be independent of the glandular structure in its origin.

It is this form from which the superficial epithelioma may take its origin.

The French school of dermatology has given this peculiar affection of the face the name of acne sebacee concrete. It is the carcinoma of Volkman. Seborrhoic epithelioma is at first characterized by simple desquamation, which is more or less adherent to the skin, and occurs in two forms, the disc-shaped patches, the dimensions of which vary from that of a three cent piece to that of a twenty five cent piece, rising slightly above the surrounding skin. In the second variety of the circumscribed form of the disease it shows itself in the form of red patches situated on the face near the eyelids, on the wing of the nose and frequently on the temples. These patches are covered with light scales. The scales have prolongations which penetrate into the deeper portion of the corium. Brocq thinks the lesions described constitute the first stage of superficial epithelioma and is comparable with Paget's disease of the nipple.

In speaking of the potentiality of acne sebacee concrete, Brocq says it is difficult in the early stage of the disease to say whether there is commencing epithelioma or lupus erythematosis. It would seem, says Brocq, "that it is a sort of indifferent lesion which has the potentiality of development either in the direction of a lupus or in that of an epithelioma, according to the age of the patient."

Although histology has almost reached perfection, and micro-biology and microchemistry to an excellence far beyond expectation, yet the germs which cause epithelioma are still unknown and we have to trust to experience as our best guide in the diagnosis, prognosis and treatment of the disease. But we feel that science has not yet said its last word upon the relations of seborrhea to epithelioma. The symptoms of seborrhoic epithelioma are closely related in many respects to those of lupus erythematosis and lupus vulgaris. We find seborrhoic epithelioma following the same chronic course as tuberculosis and syphilis. Epithelioma shows an innitial point of infection which is followed by regional and then by general infection.

"Bodies supposed by competent observers to be protozoa are found in the epithelial cells of cancer. They are generally present

in the cell protoplasm, pushing the nucleus of the cell which they inhabit to one side. Exceptionally they have been found in the nucleus of the cell itself. In many instances a capsule surrounding the parasite can be made out.

"As met with in cells of cancer they are round or oval bodies, with a central nucleus surrounded by a layer of protoplasm, which stains less deeply than the nucleus. An infected cell usually contains one protozoa, but as many as fifteen have been found in a single cell (Ruffer and Walker). They are more numerous in the growing edge of a secondary tumor, and can be differentiated from the cell which they inhabit and its nucleus by the difference in reaction to staining agents which they exhibit."

Seborrhoic epithelioma is not confined to the old but is sometimes observed in the young.

A patient I now have under treatment, who is under 40, gives a history of eczema. At 15 there appeared a small scale about a half an inch from the left side of the nose. Beneath this scale a small papule made its appearance which had continued up to the present time, but within the last three years five or six others have made their appearance, and the first one is undergoing a transition into a slight malignancy. There are light crusts formed upon the first one, beneath which is a very shallow fissure. The crusts are thrown off from time to time, but the slight fissure remains, and there can be no doubt but that the origin was in the peculiar germ which produces the epithelioma.

One who came under my observation was a Swede about 48 years of age, who had a very red skin which was subject to inflammation from slight irritation, and gave a history of eczema. On one side of his neck were rows of pearly looking tumors, ranging from the size of a millet seed to that of a pea. These tumors had been there for many years, and evidently were non-malignant. But besides those upon the neck there were some upon the face and one upon the center of the lower lip. This one upon the lip had the same characteristics as the others, but was the first one which made its appearance, and three years previously to the time I saw him it had begun to undergo degeneration. He had had it treated by a quack who had put some salve or paste upon it, and through the use of this salve or paste the tumor had partially healed in the center, but after leaving off treatment for six months the disease assumed its normal condition with a tendency to the formation of crusts with papular edges. The glands were not involved, but the case proves that innocent seborrhoic epithelioma frequently changes to malignant. I advised curreting, then afterwards an application of twenty-five per cent. of pyrogalic acid ointment which is painless and would cause suppuration in the ulcer, but the man objected.

During the present year in the month of February, an old lady was sent to me for diagnosis, who had five or six different epitheliomatous patches upon her face which were of many years duration. The first one came upon the right temple, the next one down near the side of the nose, and the third one upon the outer side and lower portion of the eye. This one about the eye had several cupped ulcers, which had not as yet coalesced into a large crater. The peripheral edges were beaded, which is the diagnostic element in the diagnosis of epithelial growths, with the tendency to crater formation in this particular growth. There was also one upon the chin in which there is no particular tendency to malignancy at present.

Mr. P. P. F., of Oklahoma City, aged 67, was examined by me before the class at Christ's Hospital for some chronic sores upon the face which were of many years duration, and had resisted all forms of treatment. There were quite a number upon the upper part of the face and one patch upon the lower portion of the cheek. Some of them had ulcerated, and formed upon the ulcers were dark colored crusts. The ulcer was not entirely circumscribed but nearly so. Upon raising this crust the periphery was beaded. Some of these patches upon the face were covered with very thin dark colored crusts, the ulcer being very superficial, while there were many little scaley

patches that had not begun to ulcerate as yet. There were no secondary deposits in the glands that I could detect. The man's general health seemed fair, with the exception of a cataract in one eye. No treatment.

Mr. W. R., of Illinois, came to me about four years ago with what appeared to be a scabby eruption upon the upper part of the face which had been diagnosed by physicians in that State as eczema, but not having yielded to any treatment he came to me. Owing to the man's age, and the appearance of the ulcers, and the dark color of the crusts I suspected epithelioma, and after from four to six months treatment I became satisfied that the origin was in the germ of seborrhoic epithelioma.

Clinically seborrhoic epithelioma presents in many of its manifestations symptoms similar to those in scrofuladerma. Some years ago a lady in her fiftieth year called my attention to a nodular tumor in the cheek which had the natural color of the skin. It was somewhat larger than a cherry, and seemed to be in the subcutaneous tissue, and I diagnosed it as a scrofulus tumor, which we find in scrofuladerma, but not being satisfied with my opinion she consulted an eminent surgeon who excised it as an epithelioma, but since the removal of the tumor two others have made their appearance near the site of the former one. All the tumors have the general appearance of unity of type. This patient had had eczema of the face. The more recent tumor seems now to be stationary. At the present time she is suffering from an eczema or seborrhea on the back between the shoulders.

In the epitheliomatous there is some peculiarity of the skin which is obscure. In such patients there is a tendency to inflammations and infiltrations in the epithelial cells from slight irritations owing to deficient vitality and mechanical irritation. But some other element is necessary for the long continued course of the disease.

I have included in the list of patients the case of Dr. Redden; not that he had a history of eczema or seborrhea that I know of, but that he had a peculiar skin, and from the long duration of the disease I could not class it as an ordinary epithelioma, and from the history furnished me by his physician, Dr. McClintock, I believe his disease to belong to the class of epitheliomas now under consideration.

Dr. Redden, peculiar skin, skin thin and florid, blood vessels standing out clearly on surface of the skin. Injury to the skin was often followed by slow repair and imperfect healing with crust formations with dark spots lasting a long time. He had no serious trouble until twelve years before his death, when at the front on each side of the nose where he wore pinch glasses habitually he developed two spots which were red, irregular in outline, becoming soft and spongy, and ulcerating in spots with healing between. The physicians of Topeka agreed upon a diagnosis of lupus vulgaris and advised excision. He afterwards consulted specialists in St. Louis and New York, London and other foreign cities. All agreed to the diagnosis of lupus.

Two years before his death the surrounding structure became invaded, infiltrated, indurated, and the diagnosis was changed to epithelioma. Possibly the disease had been epithelioma all the previous ten years, but not so in my opinion. He now asked for an excision. Professor Senn, of Chicago, diagnosed epithelioma, and gave it as his opinion that the disease had been epithelioma from the beginning. He removed a great part of the nose and some cervical glands. New nose formed from forehead. Disease promptly returned. The new nose was excised. Wide excision was made, but the disease again returned. He now went to Professor Wyeth, of New York, who removed the new nose together with invaded tissue, but with no beneficial results. Death followed twelve years after the beginning of the disease in the skin of the nose.

Any irritant such as a piece of glass or sand introduced into the epithelial structure will cause excessive proliferation of the epithelial cells, which may produce the down growth of the cells into connective tissue. But when the irritant is removed, proliferation ceases and the excess of the embryonic cells disappear through absorption. But

this is not so in the epitheliomatous growths. There seems to be something ever present which continues the proliferation of epithelial cells into the structure beneath the epithelial layer. Dr. Redden had the peculiarity of skin over the nose where the sebaceous glands are very large, and the local irritation produced by the pinched glasses with deficient vitality in the structure of the skin to repair the injury produced by the glasses, but we find that when the irritation is withdrawn the proliferation of the epithelial cells continues. There was some stage in the affection when some new element was introduced which is ever present like the bacilli of tuberculosis, and keeps up the irritation.

The diagnosis of the seborrhoic form of epithelioma in its earlier stage is not very easy. The patches of granular surface of epithelioma resembles that of lupus erythematosis. However, in lupus erythematosis the scales are more dry and scaly, and adherent. In epithelioma the subjacent tissues are more or less indurated and bleed more easily.

In the second stage of epithelioma there is the cupped appearance of the ulcers, and tendency to the formation of crusts with prolongations into the corium.

In the third stage the cups coalesce and form large craters with papular edges, with the secondary deposits in the lymphatic glands and general constitutional infection.

The treatment in the first stage is antiparasitic. It is probably best managed with a twenty per cent. ointment of resorcin or some other germicide; but as the first stage is of long duration the treatment may be varied from time to time as symptoms seem to indicate, to prevent the spreading of the disease over the adjacent surfaces.

In the second stage the galvano-cautery needle may be applied to the cupped ulcers, and probably pyrogalic acid in twenty and twenty-five per cent. ointment, which produces suppuration and is painless, is probably the best remedy.

In the third stage where large craters have formed and there is constitutional infection the best remedy is nolime tangere.

The Golden Belt Medical Society.

The afternoon session of the regular midsummer meeting of the Golden Belt Medical Society was called to order by President Sheldon in the office of Dr. Hazlett, at Abilene, Kansas, at 4:30 p. m., with the following members present: Drs. Sheldon, Lindsay, Pearse, Bellows, Neptune, Harvey, Hawthorne, Brooks, Riddell, Hunter, Ketchersid, Jolley, Hazlett, LaFevre, Hayes, Felty and Curtiss.

The minutes of the previous meeting were read and approved.

On motion a recess was taken in order to have presented a couple of interesting clinical cases by Dr. Hazlett; which cases proved of great interest and elicited spirited discussion, participated in by Drs. Hazlett, Ketchersid, Pearse, Lindsay, Sheldon and Bellows.

On behalf of Dr. J. C. McClintock of Topeka the secretary presented an amputated toe, affected with the rare disease, ainhum, briefly describing the affection in its clinical and pathological manifestations.

The society met for the evening session in the parlors of the Union Pacific Hotel, and papers were read as follows: Address by President Sheldon; "Malaria," by Dr. Hayes; "Symphyseotomy," by Dr. Hazlett, and Report on "Uremia," by Dr. LaFevre.

On motion of Dr. Lindsay, Drs. Geo. E. Bellows and H. E. Pearse of Kansas City, Mo., were unanimously elected to honorary membership.

On motion of Dr. Harvey, Salina was chosen as the next place of meeting.

Adjourned.

E. B. LAFEVRE, Secretary.

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Kansas Medical Journal.

PUBLISHED WEEKLY

BY THE UNION PUBLISHING COMPANY.

SUBSCRIPTION PRICE, INCLUDING POSTAGE:

Per annum, in advance..... $1.00
Single copies..... 15 cents

Subscription may begin at any time. The safest mode of remittance is by bank check or postal money order drawn to the order of the undersigned. When neither is accessible, remittances may be made at the risk of the publishers oy forwarding in Registered Letter. Address

UNION PUBLISHING CO.,
TOPEKA, KAS.

W. E. McVEY, B.S., M.D., EDITOR.

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Topeka, Kansas, Saturday, Aug. 28, 1897.

Sensibility in the Formation of Character.

The skin and its nervous susceptibility has much to do in the formation of character.

The intelligence of an individual depends much upon the acuteness of the touch corpuscles found in the skin.

The skin is a sensory organ, and is closely related in its sensory function to the brain and spinal cord; how much it has to do in the metamorphosis of external impressions which it receives and converts into thought is not known, but it is known that where there is bluntness of sensibility of the tactile corpuscle there is also bluntness in mental operations.

The ennobling difference between one man and another is that one feels more than the other.

In those persons with deficient sensibility there is a callousness which is capable of every sort of bestial habit and crime.

The man of blunted sensibilities commits crime without pleasure, without horror, without pity, precisely as they are incapable of sympathy, as was seen in the boy Coulter, who murdered another boy without cause, pity or sympathy. Upon examination the boy was found deficient in the general sensibility of the skin.

Fineness and fullness of sensibility quickens the intellect, and is the guide to reason and formation of judgment, and results in the evolution of the higher thoughts which have distinguished the great thinkers of the world. There is such a thing as innocent undeveloped sensibilities found in many young persons, especially boys, which are closely related to the various passions necessary for the perpetuation of the race. These passions are wild and strong and often misleading, as all first passions and thoughts are liable to be, and needs to be disciplined, and if not bridled results in sexual immorality, which needs evolution of the higher centers to correct and train the lower sensory functions for the higher and nobler purposes they were intended.

DR. L. C. DUNCAN who has been in New York during the summer will return to Topeka in October, to take up his work in the Kansas Medical College as professor of anatomy.

DR. W. A. P. ANDREWS, the former traveling salesman for Reed & Carnrick, so well known to the profession of Kansas, is the proud and happy father of a son.

DR. J. C. McCLINTOCK has returned from New York where he has spent several weeks among the hospitals and clinics and incidentally taking a little recreation.

Wonderful! Wonderful!!

The Medical Age.

"William Smith, M.D., D.O.," in the *Journal of Osteopathy*, in order to exhibit the education which he has received at "the University of Edinburgh and the Royal Colleges of Physicians and Surgeons of Edinburgh," cites among the wonderful cures which have occurred to osteopathy a man who, after being told he had only "three days to live," "that no one could do him any good, it would only shorten his life to move him," was "given up to die with that terrible disease, cancer of the stomach." "*For three months before his arrival he had passed no urine*, and during the progress of the disease the patient and his wife both mentioned the fact to the attending physicians, but the clear and scientific explanation was given that the 'tumor had closed over the tubes leading from the kidneys to the bladder;' nothing could be done, he must pass away. Against the very strong advice of his physicians his devoted wife brought him to Kirksville, and at once found that the terrible cancer of the stomach was nothing more than a distended bladder (we should have thought that a wife so astute at discovery might have accomplished this feat at home.—ED.) . . . Here the distended bladder was relieved by means of a catheter and seventy-two ounces of stale, ammoniacal urine was drawn off. In thirty hours three hundred ounces (approximately five gallons.—ED.) of urine were voided, and the patient is in a fair way to recover."

Can ignorance and cheek go farther? And "Bill" is going to "write up" the ignorant "drug doctors."

Physicians' and Lawyers' Fees.

Atlantic Medical Weekly.

An interesting case is on trial at Pittsburg, Pa. By the testimony of a physician a plaintiff secured $6,000 damages for injury received in an accident. The lawyers took $3,000. The physician got nothing, and is now suing the lawyers for his fee, and each of the legal lights insists that the doctor's fee should come out of the other fellow's share.

A similar instance, barring the suit, occurred in this city. Not long ago a physician made affidavit to the serious injuries received by the plaintiff, and when summoned to court spent a day in answering useful and useless questions of the opposing lawyers for the munificent fee of $1.60, expert testimony not being allowed.

The finding in the case was decided by the doctor's testimony, and verdict with $6,000 damages given. Of this the lawyers took $3,000; and the modest claim of the doctor is yet unpaid.

There is too little consideration shown the medical fraternity by the legal. Should we desire their advice a retainer is demanded, while they feel entirely at liberty to take our time, utilize our records, and profit by our experience and advice with no thought of payment. It is for the good of our patient, you know; and we have knowledge of a case where a lawyer charged in his bill $25 for time spent in consulting a physician relative to the case, and yet declined to pay the doctor an office fee of five dollars.

Some one will arise in the rank of the medical profession who will dare to say: "Five dollars, please, if you desire my advice in this case, and fifty dollars if I am called to court."

Demonstration of the Pfeiffer-Widal Typhoid-Serum Reaction.

By John C. Spencer, in Pacific Medical Journal.

In 1895, Widal, of Paris, continuing along the line of experiments by Gruber, Pfeiffer and Kolle, applied the knowledge so derived for the establishment of a reliable means of diagnosing typhoid fever in its early stages. The diagnostic value depends upon the presence in the blood and certain secretions, of an albuminoid body, by some called "agglutinin, by others

"paralysin." This body in solution, brought in contact with a culture of typhoid bacilli, will, according to the degree of concentration, and also modified by the virulence of the particular colony of the bacilli, be followed by certain phenomena. The very active movements of typhoid bacilli will at first be slowed. Certain individuals will cease to move entirely, and many others will have grouped themselves into relatively large or small masses, suggesting somewhat the tangle which angle-worms are wont to form when lying in a bait-box. It is this grouping or clumping which constitutes the characteristic upon which the diagnostic value of the phenomenon rests. It has been observed that a strong admixture of normal serum, to a weak variety of the Eberth bacilli will be followed by clumping. When, however, a moderately weak dilution of the serum, or emulsion of dried blood from the suspected case is used, the reaction is positive.

The reaction has been found in using diabetic blood, placental blood, and from the blood of certain animals. When a case has been examined in the earlier stages with a negative result, and clinical manifestations persist, subsequent tests should be made. The further away from onset of clinical manifestations that a negative result is obtained, the stronger the presumption that we are dealing with a non-typhoid infection.

The earliest date upon which this reaction has been obtained, as far as I have been able to ascertain from reference to the already formidable accumulation of literature on the subject, has been on the third day. (Appel and Thornbury, *Jour. of Am. Med. Ass'n.*, Vol. XXVIII, No. 6.) The length of time that this agglutinative property remains in the blood has been variously observed as seven years, seventeen and one-half years, and thirty-one years.

At the outset it was considered necessary to procure a few cubic centimeters of the blood of the patient, from which the serum was obtained. Johnson, of Montreal, experimented with a drop of dried blood which was subsequently rubbed up with a few drops of sterilized distilled water. Likewise, instead of using a bouillon-culture of the Eberth bacalli, an emulsion was made of an agar-culture, using a very small quantity from the colony, and sterilized distilled water as before. In the latter case it is very easy to get an artificial reaction because of the possible presence of too many bacilli. In any event a bouillon-culture is so easily made that it is always preferable, both because of the fewer bacilli present in a given quantity as well as the increase in virulence from such a fresh growth. The nature of these agglutinating bodies is essentially albuminoid. They have been assigned by Widal and others to the globulins.

Already nearly fifty separate contributions on the subject of this demonstration have appeared in the literature, in various languages. Doubtless most of my hearers have become familiar with the few meager details which I have presented. For the reason that the subject has been so thoroughly and elaborately presented by others, I have forebore to touch upon any but the essential facts. The far-reaching importance of the application of this principle, can hardly be overestimated. Experiments on several hundred cases have established the reliability and certainty of this test. Its value as a diagnostic aid is immeasurable. Whereas, previous to this era, the most reliable means of diagnosing typhoid lay in the use of the Elsner culture-medium, whereby a delay of many days was necessary until the bacilli should have appeared in the stools, now the collection of a drop of blood from the lobe of the ear of the individual, caught on a cover-glass, a bit of mica or clean tissue-paper, enables the diagnosis to be established at as early a period as three days after the onset of the clinical manifestations, as we have seen. The inference most naturally drawn from the action of these agglutinating substances outside of the animal body, is the application of the same, either as such, or in a somewhat modified form, as a prophylactic or as an abortive after the typhoidal infection has once been established. This

has already been the subject of experiment by two English observers (Wright and Semple.—*Brit. Med. Jour.*, Jan. 30, 1897.)

If applicable in the case of typhoid, it would seem as though some similar method would be evolved for the prevention and cure of all of the acute infectious diseases. From my humble standpoint, it would seem as though medical science were but on the threshold of wondrous developments in the realm of preventive treatment, and more simple, certain, and rapid methods of diagnosis. Unless there should be a sudden and radical reversal of hitherto accepted facts and methods of procedure, the evolution will in all probability take place along these lines.

Diphtheria Treated With Sozidole.

American Medico-Surgical Bulletin.

Dr. S. Schwartz, of Constantinople, makes the following statements regarding the use of sodium-sozoiodole, in the treatment of diphtheria as well as a prophylactic.

Insufflations are made every four hours, of powders made according to the subjoined formulas.

For children under 2 years of age:

Sozoiodole sodium, finely pow'd, 3 parts.
Sublimate sulphur, 6 parts.
Saccharin, 1 part.

For children 2 to 4 years of age:

Sozoiodole sodium finely pow'd } equal
Sublimed sulpher } parts
Sachcharin, sufficient.

For children over 4 years of age:

Sozoidole sodium, finely powdered.
Saccharin, sufficient to sweeten.

The insufflations are made with a paper tube, which is burned immediately after use, in order to avoid any further infection. A solution of potassium chlorate, 1 to 1.15: 180, is also given, in tablespoonful doses, to neutralize the fragments of membrane that may have been swallowed; and at intervals, tablespoonful doses of a cinchona decoction, with cognac or malaga, are also given. In order to ward off any post-diphtheritic paralysis, extract of nux vomica should be given from the beginning of the treatment.

The sozoiodole insufflations are reported to possess the following advantages:

1. The strength of the child is preserved, since the insufflation requires but a few seconds.

2. Even though the powder may not directly reach the infected parts, it is carried there by the saliva and in the act of deglutition, and remains there, gradually dissolving and penetrating to the deepest lacuna of the tonsils and disinfecting them.

3. The entire buccal cavity, in which many forms of microbes are found, is also disinfected.

4. The manipulation is so simple a one as to be readily performed by any one.

No relapses were ever observed, nor were any unfavorable effects on the kidneys noticed; on the contrary, with the decline in the general symptoms, the albuminuria diminished. The membrane, once fallen off, never returned.

Sozoidole insufflations were also ordered to be used several times daily on children who, of necessity, came into contact with other children afflicted with diphtheria, and adults were ordered to gargle several times daily with a 2 per cent. solution, which was also to be used as a mouth-wash. In consequence of this measure, throat-affections were but very rarely contracted by the members of a family in which one was afflicted.

The Author of the Embryonic Theory of Tumors.

John J. Eyre. M.D., in the Lancet.

Mr. W. Roger Williams in his interesting paper on "The Role of 'Rests' in the Origin of Tumors," read at the Carlisle meeting of the British Medical Association, where he speaks of "when Cohnheim first announced his celebrated theory of the origin of tumors from sequestrated fragments," has fallen into a very justifiable, because almost universal, error among pathologists outside of Italy in considering Cohnheim as the author of the embryonic theory of tumors; that is, if we accept the dictum that

the person who first publishes a theory, and at the same time gives evidence that this theory originated in his brain through investigations made by him, should be considered as its author. This being admitted, there is not the least doubt that the true author of the embryonic theory is Grancesco Durante, the eminent professor of surgery of the University of Rome, as is clearly proved by a monography written by him entitled "The Physio-pathological Connection between the Structure of Maternal Nævi and the Genesis of some Malignant Tumors."

Perhaps the best way to present the evidence which undeniably proves the prior claim of Professor Durante to this theory will be to give the literal translation of an extract taken from a paper published by Durante, which not only contains that portion of his original monography in which he stated his theory, but also a very interesting account of the genesis of the theory in his mind.

"The frequent appearance of malignant tumors in these congenital productions, which are commonly called maternal nævi, already observed by many clinicians, especially impressed me in two cases. After I had treated surgically two dermoid maternal nævi I saw two sarcomata rapidly arise. I therefore thought that a predisposition to the development of malignant tumors must exist in them. I studied the pieces removed before the appearance of the neoplasms microscopically, and in both I found an angiomatous tissue, composed of capillaries in one and of sanguineous spaces in the other. The stroma in both consisted of round and fusiform young cells, although at first sight the sanguineous canals did not appear furnished with walls proper. I therefore convinced myself that these elements with embryonal characters were congenital germs, which, incompletely extirpated by me and irritated by the operation, gave origin to the sarcomas.

"To strengthen still more the concept that I had formed I instituted histological reresearchs on numerous maternal nævi removed from cadaverus appertaining to individuals of diverse sexes and ages. I found that these congenital productions were generated either by an anomaly of development of the papillary bodies or by an irregular arrangement of the epidermic cells. In the greater number of them, excepting the pigmentation of the mucous body of Malpighi and of some connective tissue cells of the derma, the epithelial elements and the connective tissues were seen completely developed, and the delimitation between the derma and epidermis was still very recognizable. In a relatively very small number of the nævi I observed in the dermoid type, in place of the fibrous tissue, the above-mentioned young cellular elements; in the epidermoid, branches of epithelial cells which descended deeply into the derma, in which they gradually lost the cutaneous epithelial form through being reduced in the deepest parts to nests of embryonal elements.

"This research led me to the belief that malignant tumors develop in the last species of nævi, which contain congenital connective tissue and epithelial germs. Then embryological and teratological studies, anatomico-pathological observations, and the evolution of certain organs at the period of puberty presented themselves to my mind, and from a consideration of all these facts, I came to the conclusion expressed in a little memoir on the structure of maternal nævi, published May 26, 1884, that the 'elements which have preserved embryonal anatomical characters in the adult organism, or which have reacquired them through a deviation of the chemico-physiological activities represent for me the generating elements of every neoplasm properly so-called, and especially of those which are malignant,' Such elements remain included in the well-developed tissues for years and years without an inkling of their existence, when an irritation, a simple stimulus, suffices to excite in them that movement and those cellular properties that heat excites in the elements of the germinative macula of the eggs of birds which have lain inert from the moment that they are laid. In fact, if we reflect for a moment how much the disposition of the tissues which co-operate in the organic construction of an epithelial cancer

may be complicated, we must at least admit that the genesis of cancer in a limited point of the organism is due to the reproduction of entire embryonal acts, represented by the cells that possess the necessary anatomico-physiological properties."

This theory of Durante's was published in Italy, and generally accepted there a year before Cohnheim's "Manual," in which he first gave expression to the embryonic theory, was published in Germany. Besides Durante's theory is not so exclusive as Cohnheims, as Durante admits that elements which have reacquired embryonal characters in the adult organism through a deviation of the chemico-physiological activities in the adult organism may also be the generating elements of neoplasms, and that an irritation or a stimulus suffices to excite in these elements the growth of a tumor. These two statemenls were not accepted by Cohnheim, but they are consonant with the teaching of the majority of the pathologists of to-day.

When Professor Durante published his theory, now twenty-two years ago he was a young man of 29 years of age, and occupied the post of Libero Docente of Surgical Pathology at the University of Rome. It was, however, only a forecast of the ability he has since shown both as a scientific and practical surgeon. The ultimate outcome of this is his excellent "Treatise on Surgical Pathology and Therapeutics," which is now being issued in Rome, and of which two volumes have been already published. To anyone who is conversant with the Italian language I strongly recommend this work, more particularly that portion of it which contains the division on tumors, which certainly has not been surpassed, if equaled, by any work on tumors written up to the present time.

Chloroform and the Heart.

British Medical Journal.

In an address lately delivered before the Society of Anæthetist, Mr. Leonard Hill brought forward additional evidence of the incorrectness of the doctrine, promulgated by the Hyderbad Chloroform Commission, that chloroform has no direct action on the heart. This new evidence is the outcome of his researches into the influence of the force of gravity on the circulation of the blood, which were communicated to the Royal Society in November, 1894, and published in detail in the *Journal of Physiology* in the following year. When an animal is turned from the horizontal to the feet-down position, the canula in the artery being ingeniously placed in the axis of rotation, there is a fall of blood pressure in the carotid, and a fall of intracranial pressure. The fall of blood pressure is not great, and in a normal animal under morphine it soon rises to but a little short of the pressure recorded in the horizontal position. The mechanism of this recovery or compensation has been carefully investigated by Mr. Hill, and he has shown that it depends upon the integrity of the vasomotor and respiratory systems, together with the efficiency of the heart. In the feet-down position the blood accumulates in the vessels of tne abdominal viscera, and it is "lifted" on to the heart by an increase of tonic constriction of the splanchnic vessels, aided by an increase of abdominal pressure brought about by contraction of the muscles of the abdominal wall. Previous section of the splanchnic nerves, or division of the dorsal spinal cord, by removing the tone of the splanchnic vessels, leads to a much greater fall, and does away with the power of compensation, although the animal endeavors to drive on the blood by powerful contractions of the expiratory abdominal muscles. When these are also divided the blood pressure falls still lower. If the chest is opened the heart is seen to be bloodless and empty, but can be immediately filled by pressure on the abdomen. Increasing activity of the vasomotor center is the main factor in bringing about the recovery of pressure. Now, Mr. Hill finds that chloroform is a most powerful agent in doing away with the power of compensation. A heart under the influence of chloroform is not able to do the same additional work required to maintain anything like the same pressure when the animal is turned from the hori-

zontal to the verticle position. The experiments show the essential difference between a low pressure produced by vasomotor paralysis and one produced by chloroform, and leave no doubt whatever that the dangerous fall produced by the drug is due to direct action on the heart.

Mr. Hill has not omitted to point out the practical bearing of his experiments on the treatment of that commonest cause of death from chloroform—syncope in an early stage. In one year, out of 41 deaths from chloroform syncope, 39 occurred in the primary stage before the patient had been touched by the knife. The sudden application of concentrated chloroform vapor causes struggling and holding of the breath, the glottis is closed, and intrathoracic pressure is raised; the lungs are thereby compressed and largely emptied of blood; this leads to engorgement of the right heart and congestion of the venous system, until at last two or three very deep respirations are taken, and there is a sudden rush to the left heart of a mass of blood surcharged with chloroform. The heart, already dilated, is then paralyzed. Holding strong chloroform vapor to the nostrils of a struggling patient is to court disaster. Mr. Hill's experiments afford additional proof of the difference in the action of ether and of chloroform. With ether the fall of pressure is much more gradual, and when the animal is placed in the feet-down position the drop of pressure is comparatively small; but even when the ether is pushed and a low pressure produced it can be at once raised by compression of the abdomen or by the resumption of the horizontal position. The heart is comparatively little affected, and, as the blood is brought to it, it can pass it on, but the chloroformed heart cannot. As to the physiological action of chloroform and to the comparative safety of ether, recent experiments on animals are, we are glad to see, in complete accord with clinical experience.

The Black Forest (Germany) has a sanitarium devoted to the treatment of tuberculous patients. They are treated principally upon the dietic plan.

Contaminated Meat.

Dietetic and Hygienic Gazette.

Apart from added poison and parasitic disease, says the *Medical Chronicle*, meat may become poisonous in three ways:

1. From the presence of disease, at the time of slaughter, in the animal from which the meat is derived.

2. From micro organisms which attack or develop in meat subsequent to slaughter.

3. From the presence of toxalbumoses or the ptomaines.

The symptoms produced by poisonous meat may be grouped in two divisions: 1st, those due to a true infection; 2nd, those due to simple poisoning. In the first division the train of symptoms runs the usual course of an infective disease, as witnessed by the occurrence of symptoms suggesting typhoid fever in 600 people who had eaten of meat from an animal killed while moribund. In the second division the symptoms usually resemble those due to acute gastro enteritis—violent vomiting and purging, rapid loss of strength, with extreme depression, cramps in the calves of the legs, and general coldness of the surface, with subnormal temperature; sometimes the temperature is elevated. In these cases the average prodromal period is shorter than in those of class 1, and the acute stage of the illness does not exceed a few days at the longest. The post-mortem appearance comprises those of gastro enteritis.

Some toxines produce special symptoms, as for instance, an atropine like base, found in decomposed meat—sausage, ham, and certain kinds of sea fish—sturgeons, which is said to produce symptoms resembling atropine poisoning. The toxine or toxines (probably mixed products) contained in the same meat may produce different symptoms in different people. This is probably due to an irregular distribution of the toxine (and in some instances the bacteria) in the bulk of the meat. This also accounts for the varying intensity in the symptoms of different individuals who have eaten from the same meat supply, and also from the nega-

tive results which so frequently attend the bacteriological and chemical investigations of those portions of the meat which remain after an outbreak of meat poisoning. The negative results are probably also due in part to the fugitive or unstable nature of the poison—ptomaines or toxalbumoses.

As many of these chemically-formed toxic products resist the prolonged action of heat, no amount of cooking can be relied upon to render harmless infected meat. In several instances it has been observed that if the flesh of an animal, in a certain stage of septic disease at the time it was killed, be eaten shortly afterwards, it may not produce an ill effect; but if it be kept for some days it becomes toxic, and will produce the usual symptoms of meat poisoning in those who eat it. The flesh of healthy animals may become poisonous by keeping, either from contamination with micro-organisms which are pathogenic to man, or from the production of toxines in the meat owing to the action of non-pathogenic putrefactive micro-organisms. Meat may be infected with bacteria after it has been cooked, as well as when it is in the raw state. Although, in a general sense, we understand the processes that take place in healthy meat which is undergoing decomposition, we are far from being able to satisfactorily explain all the attendant circumstances. Bad, or putrid meat, is proverbially dangerous as food, and yet meat that is in an obvious state of decomposition is frequently eaten with impunity.

Statistics afford discordant results with regard to the kinds of meat which most frequently give rise to out-breaks of poisoning, pig meat, potted meat, cow and ox meat being more commonly the offending varieties. The percentage of deaths is difficult to estimate, as the number of persons attacked is frequently not stated, the fatal cases only being recorded. Outbreaks with a mortality of 1.6, 4.3, 30, 40 and even 60 per cent. have been recorded. As regards preventive measures to be taken in relation to meat poisoning, too much emphasis cannot be laid on the necessity of stringent supervision of the lower class butcher. There should also be a close inspection of all kinds of prepared and preserved meats. Cleanliness should be observed in all places where meat is prepared or stored. The cooking must be thorough; this will destroy all micro-organisms, but not necessarily a toxine, which would retain its virulence in spite of having been subjected to the temperature to which the meat would be raised. Rigid supervision, therefore, of our source of meat supply, and cleanliness in its preparation for consumption are necessary.

Septic Infection of the Joints.

By James K. Young, M.D., Philadelphia, in the Philadelphia Polyclinic.

On several occasions I have called your attention to the relative frequency of tuberculous affections of the joints. Out of the large number of joint cases applying for treatment at the Orthopedic Dispensary, over 30 per cent, are tuberculous in nature. Of these the spine is affected in 15 per cent. of the cases, the hip in 13, the knee in 3, and the smaller joints much less frequently. Septic infection of the joints is of much less frequency, being comparatively a rare affection. Septic affections of the joints include gonorrheal synovitis, acute septic arthritis and acute epiphysitis of infancy.

The first case to which I shall call your attention is one of gonorrheal synovitis in a young man who was treated at this clinic some four weeks ago, and who has just returned to report his progress. You will remember that four years ago he had an attack of gonorrhea, following which he had the symptoms of an acute synovitis in the left hip-joint. Pain, swelling and heat were followed by false anchylosis of the joint, and a continuance of the swelling, with atrophy of the muscles of the limb. These adhesions were forcibly broken up, and he returns to show the presentation you see. He walks perfectly well, but upon examination there is still some limitation of motion upon forced flexion and extension. The patient is perfectly satisfied with the position and condition of the limb, but another attempt will

have to be made to increase the amount of flexion and extension before it will be a success from an orthopedic standpoint.

The importance of these cases of gonorrheal synovitis is chiefly in their prognosis when compared to cases of osteitis. With the history which he states he has had, and with the condition of the limb found at the first examination, the opinion was given that the anchylosis was of the fibrous variety; that the prognosis was good, and that under forcible extension and flexion the limb would be put into good condition. There was no shortening of the limb, and atrophy, though present, was slight. The marked fixation of the limb would give the impression of an osteitis, but the history of the case excludes this. Upon examination there was found a systolic murmur in his heart, and in all these cases of gonorrheal synovitis you should first examine the heart carefully for valvular lesions before giving ether. In a similar case two years ago, in which we broke up the adhesions in the wrist-joint, synovitis following an attack of gonorrhea, the same condition existed in the heart. The patient became cyanosed, and the anesthetic had to be withdrawn. Gonorrheal synovitis affects other joints besides the hip, and is apt to attack the smaller joints (wrist).

There is also a form of synovitis occurring in females who are subject to severe leucorrhea, in which there is not a question or possibility of its being of gonorrheal origin. In a recent case of this kind both wrist-joints were affected in a young lady of 17; and I am inclined to think that there is a relationship between the absorption of leucorrheal pus and synovitis of this kind other than that complicated by gonorrheal synovitis. In either event, these cases are septic in character, and are particularly interesting from the etiologic and prognostic standpoint.

In some of these cases the cause appears to be the sequelæ of grip. Abscesses in other parts are usually associated, as in the middle ear on the subcutaneous tissue.

The next case is that of a young woman of pronounced blond type, robust appearance, 23 years of age, and a domestic by occupation, suffering with a septic arthritis at the left wrist-joint. She had consulted a number of surgeons, and was referred to me by Dr. James Hendrie Lloyd. About one year ago she had a suppuration of the middle ear, and two months later an acute inflammation of the left wrist-joint. The hand is pronated and flexed, the joint is ankylosed and swollen, but slightly painful on motion. She has worn a splint for so long that it will be well to discontinue its use, and to commence passive movements with massage. If free movement of the joint is not accomplished within a month, the adhesions will be broken up under an anesthetic. Under this form of treatment we can anticipate a rapid and permanent cure.

The next case is one of acute septic infection of the cervical spine and hip-joint, in a girl of 10 years. The father of this child died from psoas abscess, but there does not appear to be any connection between the two affections. Shortly after birth the child was attacked by an acute inflammation of the hip-joint, going on rapidly to suppuration, and followed by multiple abscesses of the subcutaneous tissue, from which she made a very slow convalescence. The peculiarity of the case is the size and depth of the cicatrices. A similar case has recently come under my observation, in a boy 3 years of age, suffering from acute epiphysitis of the left hip. When 10 months old he had two abscesses over the xiphoid appendix, and also an abscess of the left hip. Upon examination the left hip was found to be one inch shorter, with great thickening over the trochanter, about the region of the cicatrice, but the joint motion was perfect. No cause could be assigned for this acute attack; but this case is in every way identical with one which I reported in the *American Journal of the Medical Sciences* in May, 1890, in which case there was a history of infection through the umbilicus. In both cases the elbow joint was affected also. In the case of the boy icterus neonatorum was associated in addition.

Are You In Pain?

You will probably ask this question more frequently than any other. Nothing appeals to one more strongly. To be able to relieve pain, whether it be a slight nervous headache or the most excruciating suffering from a severe neuralgia, brings the height of pleasure to both patient and attendant.

The ideal remedy must not only do its work, but it must also do it quickly. Touching this point is an article in the *Boston Medical and Surgical Reporter*, by Hugo Engel, A.M., M.D. The author says:

"Antikamnia has become a favorite with many members of the profession. It is very reliable in all kinds of pain, and as quickly acting as a hypodermic injection of morphia. It is used only internally. To stop pain one five-grain tablet (crushed) is administered at once; ten minutes later the same dose is repeated, and if necessary, a third dose given ten minutes after the second. In 90 per cent. of all cases it immediately stops the pain."

IT is not at all surprising that ordinary emulsions of cod-liver oil are losing favor with the medical profession, when we consider the fact that almost every emulsion on the market depends entirely for its nutritive properties upon the proportion of cod-liver oil present, the remaining portion being made up of acacia, Irish moss, and other emulsifying and flavoring agents which add nothing to the therapeutic value of the product, but are, in fact, a burden to the weakened digestive organs of an invalid.

The great value of egg emulsions has been recognized for a long time, but the lack of permanence has heretofore proven an insuperable obstacle to their general use. Messrs Parke, Davis & Co., however, we are pleased to announce, have succeeded in securing a formula which enables them to prepare a stable emulsion containing 40 per cent., by volume, of pure cod-liver oil, emulsified only with fresh eggs and flavored with a fine quality of brandy. No acacia, no Irish moss, but cod-liver oil, eggs and brandy; every ingredient therefore a nutrient. It justly deserves ethical recognition as the most meritorious preparaion of this class now at the disposal of the profession.

Lactophenia: Analgestic and Antipyretic.

Dr Charles M. Watson, of Florence, Ala., reports briefly in the *Alabama Medical and Surgical Age*, July, 1897, on his successful use of Lactophenin, quoting these cases from practice.

"A lady about 50 years of age was suffering from an attack of dysentery. Her blood was impregnated with bile pigment to such an extent that I feared icterus as a result or complication. Such cases are always troublesome, and I treated this case as I do other cases accompanied with biliousness. For the fever, restlessness, thirst, insomnia and pain, I gave eight grains of Lactophenin, and its effect was so satisfactory that I will use the old phrase and say that it acted like a charm. I was greatly pleased with the result obtained from Lactophenin in this case.

"The next case in which I used Lactophenin was that of a girl, 10 years of age, who had a temperature of 104°, which was attended with great nervousness. In fact the nervous symptoms were such that I feared convulsions. I gave her eight grains of Lactophenin, which was repeated, when her fever was reduced to normal and she became quiet and comfortable."

PHYSICIANS and midwives are to be paid a fee of 25 cents each for reporting births, and clergymen and magistrates a similar fee for reporting marriages to local boards of health in New York state.

According to the *Homestead*, of Springfield, Mass., the larger towns of that State are being overrun with young doctors, while the country towns fail to receive an adequate supply.